

AMENDMENTS TO THE CLAIMS

1-15. (Canceled)

16. (Currently Amended) A method of generating hydrogen for use in a fuel cell system, which comprises processing a fuel that is essentially free of organic sulfur-containing compounds to produce a hydrogen-containing stream,

wherein the hydrogen-containing stream is used for hydrodesulfurisation of a primary hydrocarbon fuel supplied to the fuel cell system, and wherein in the method the fuel that is essentially free of organic sulfur-containing compounds is not the same fuel as the primary hydrocarbon fuel,

wherein the fuel that is essentially free of organic sulfur-containing compounds is processed without having been subjected to hydrodesulfurisation, and

wherein the fuel is processed to produce a hydrogen-containing stream using a steam reformer, autothermal reformer or partial oxidation reactor.

17. (Canceled)

18. (Previously Presented) A method according to claim 16, wherein the hydrogen-containing stream is used as fuel for the fuel cell system during start-up of the system.

19. (Previously Presented) A method according to claim 16, wherein the hydrogen-containing stream is used as fuel for the fuel cell system during shut down of the system.

20. (Previously Presented) A method according to claim 16, wherein the fuel which is processed contains at most 1ppm by volume sulfur.

21. (Previously Presented) A method according to claim 20, wherein the fuel which is processed contains at most 0.1ppm by volume sulfur.

22. (Previously Presented) A method according to claim 21, wherein the fuel which is processed is entirely free of sulfur.

23. (Previously Presented) A method according to claim 16, wherein the fuel which is processed is selected from bioethanol, biodiesel, rapeseed oil, rapeseed methyl ester, canola oil, canola methyl ester, corn oil, hemp oil, switch grass oil, fatty acid methyl esters, linseed oil, linseed methyl ester, sunflower oil, sunflower oil methyl ester, soy bean oil, palmitic acid, lauric acid, stearic acid, lanoleic acid and mixtures of any two or more of these.

24. (Canceled)

25. (Previously Presented) A method according to claim 16, wherein the hydrogen-containing stream is mixed with a primary fuel and delivered to a hydrogenation catalyst where organic sulfur-containing compounds in the primary fuel are converted to H₂S and/or non-sulfur-containing hydrocarbons.

26. (Previously Presented) A method of operating a fuel cell which comprises generating a hydrogen-containing stream by the method as claimed in claim 16.

27. (Currently Amended) A fuel cell system comprising a fuel processor selected from a steam reformer, an autothermal reformer and a partial oxidation reactor which is used to produce a hydrogen-containing stream from a fuel that is essentially free of organic sulfur-containing compounds,

wherein the hydrogen-containing stream is used for hydrodesulfurisation of a primary hydrocarbon fuel that is supplied to the fuel cell system and that is not the same as the fuel that is essentially free of organic sulfur-containing compounds, and

wherein the fuel cell system does not include means for hydrodesulfurisation of the fuel that is essentially free of organic sulfur-containing compounds.

28. (Cancelled)

29. (Previously Presented) A system according to claim 27, wherein the hydrogen-containing stream is used as fuel for the fuel cell system during start-up of the system.

30. (Previously Presented) A system according to claim 27, wherein the hydrogen-containing stream is used as fuel for the fuel cell system during shut down of the system.